Supplementary Information:

Calcium-deficient hydroxyapatite as a potential sorbent for strontium

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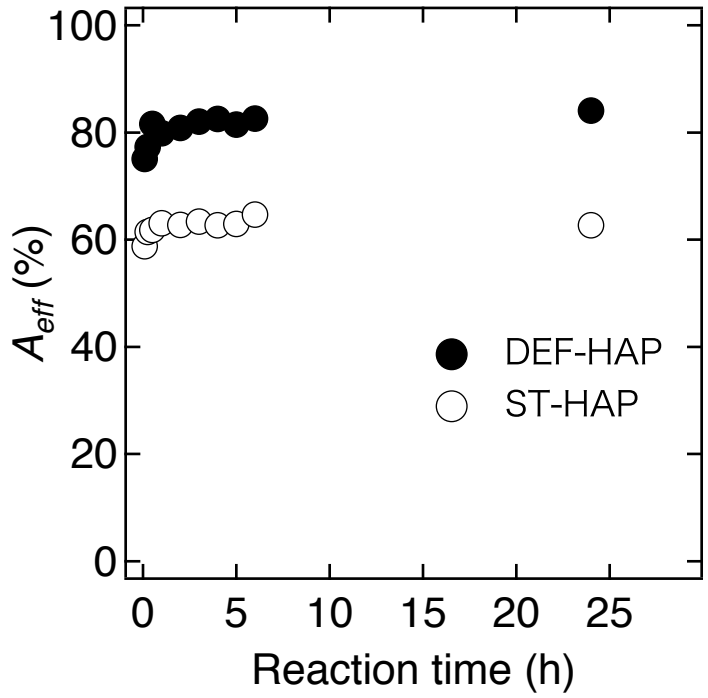

Figure S1: Dependence of reaction time on A_{eff} for DEF-HAP (closed circles) and ST-HAP (open circles). We conducted sorption tests on solution (70 mL) initially containing HAPs (350 mg) and Sr^{2+} (0.1 mmol/L). An aliquots (1 mL) of the suspension was taken at appropriate time intervals. The supernatant was obtained by centrifugation and filtration, and the concentration of Sr^{2+} was determined using ICP-MS. The result showed that the A_{eff} for DEF-HAP and ST-HAP reaches to an equilibrium after 1 h, so 5 h is enough to evaluate the adsorption behavior.

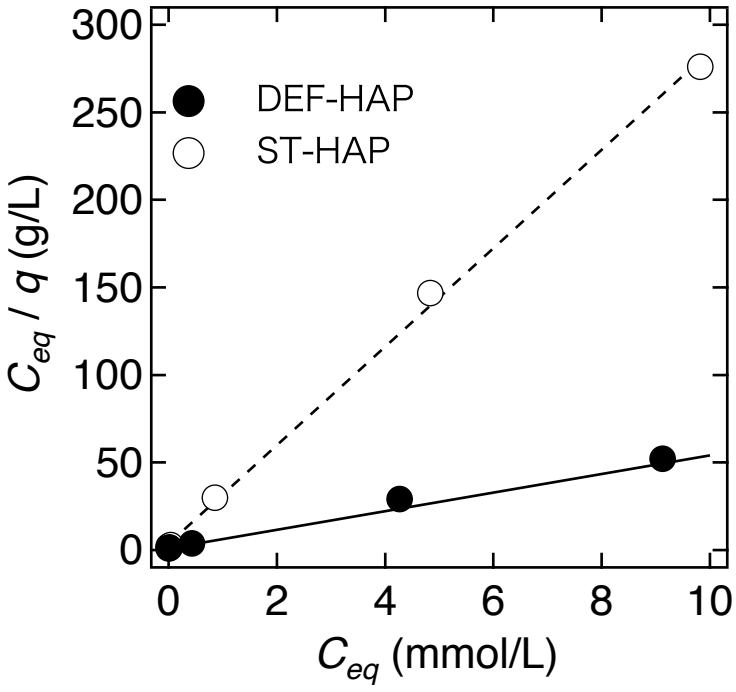

Figure S2: Langmuir isotherm plots for sorption of Sr^{2+} onto DEF-HAP (closed circles) and ST-HAP (open circles). From the obtained values of the slope and the intercept by the fitting, Langmuir isotherm constants, q_{max} and b were estimated.